

Applicants respectfully submit that no prohibited new matter has been introduced by the amendments. Written description support for the amended claim can be found throughout the specification but specifically on page 28, lines 6-10; page 37, line 18 through page 38, line 17; and in Figures 6, 7 & 9.

**I. Summary of the Office Action**

1. Claims 15-31 were rejected under 35 U.S.C. § 112 (second paragraph) as being incomplete for omitting essential steps.
2. Claims 15-31 were rejected under 35 U.S.C. § 112 (first paragraph) as containing subject matter which was not described in such a way as to enable the skilled artisan to make and use the invention.

**II. Response to the Office Action**

Applicants have canceled claim 16 without prejudice or disclaimer and amended claim 15 to better define the invention, remove unnecessary limitations and broaden the claimed method.

**III. Rejection based on 35 U.S.C. § 112 (second paragraph)**

Claims 15-31 were rejected under 35 U.S.C. § 112 (second paragraph) purportedly because they omit essential steps such as how the level of chlorotoxin binding is indicative of the presence of cancer and to what extent chlorotoxin binding is indicative of the presence of cancer. Claim 15 has been amended to provide the feature that the presence of binding is indicative of the presence of cancer. Applicants respectfully submit that the amended claim simply requires that chlorotoxin binding be determined and request that this rejection be withdrawn.

**IV. Rejection based on 35 U.S.C. § 112 (first paragraph)**

Claims 15-31 were rejected under 35 U.S.C. § 112 (first paragraph) purportedly because they contain subject matter which was not described in such a way as to enable the skilled artisan to make and use the invention. The office action purports that because only binding to metastatic melanoma cells was disclosed in the specification, metastatic and non-metastatic melanoma cells may display different levels of chlorotoxin binding. The office action finally arrives at the conclusion that it would be unclear whether chlorotoxin binding would be higher in non-metastatic melanoma cells than control cells.

Applicants respectfully submit that the specification teaches that chlorotoxin can be used to detect the presence of small cell carcinoma of the lung and melanoma in a tissue sample isolated from a patient (see page 28, lines 6-11 and page 37, line 18 through page 38, line 17). Applicants respectfully submit that the specification provides all that is necessary for the skilled artisan to practice the claimed invention.

Applicants further submit that the Office Action has not set forth a *prima facie* case for lack of enablement. The initial burden of establishing a reasonable basis to question the enablement provided for a claimed invention is upon the Examiner (*In re Wright*, 999 F.2d 1557, 1562). When making a rejection based on lack of enablement, it is incumbent upon the Office to explain why it doubts the truth or accuracy of any statement in a supporting disclosure (*In re Marzocchi*, 439 F.2d 220, 224). This can be done by making specific findings of fact, supported by the evidence, and then drawing conclusions based on these findings of fact (see MPEP § 2164.04). In such a case the Examiner should specifically identify what information is missing and why one skilled in the art could not supply the information without undue experimentation, providing references when available to support their position (*In re Marzocchi*, 439 F.2d 220, 224).

Applicants respectfully submit that in the present application, the office action has not met its burden for establishing a *prima facie* case for lack of enablement because it has not

identified any aspect of the specification where enablement is lacking. The mere recitation of an unsupported assertion on the part of the Office relating to possible differences between metastatic and non-metastatic tumors is not adequate grounds for a rejection under lack of enablement. The office action has offered no evidence in the form of references and does not specifically identify what information is missing and why one skilled in the art could not supply the information without undue experimentation.

The office action also purports that it is unclear how much of an increase in chlorotoxin binding in a tissue sample is required to be indicative of the presence of a small cell lung carcinoma given the presence of background staining in the samples in Figure 10. The office action further purports it was known in the art that a higher reading in a test sample as compared to a control does not necessarily mean that such a reading is statistically significance.

Applicants submit that the rationale for the rejection is not appropriate because all that is needed to practice the claimed invention is provided in the specification. Applicants bring to the attention of the Office that the control samples in the specification contain no chlorotoxin and any signal is therefore due to the particular detection method employed. Furthermore, the arts of histochemistry and histology are well established such that it would be routine to distinguish background staining due to a particular detection method from specific binding of chlorotoxin. Thus, Applicants have provided all that is needed in the specification to enable the skilled artisan to readily distinguish between background staining and specific staining.

## **V. Conclusion**

The foregoing amendments and remarks are being made to place the application in condition for allowance. Applicants respectfully request reconsideration and the timely allowance of the pending claims. A favorable action is awaited.

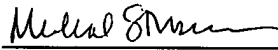
Should the Examiner find that an interview would be helpful to further prosecution of this application, he is invited to telephone the undersigned at his convenience.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

If there are any additional fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Dated: **June 13, 2001**  
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Respectfully submitted  
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